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10/714,986	11/17/2003	Evan H. Cheolas	WUR 50651/US/2	2266

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EXAMINER

NILAND, PATRICK DENNIS

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/714,986	Applicant(s) CHEOLAS ET AL.	
	Examiner Patrick D. Niland	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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1. Claims 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. It is unclear what index is being claimed in claims 4-5. Isocyanate index is common but OH index is also possible. Furthermore, it is unclear how said "index" is determined, e.g. (total number of functional groups indexed/total number of complementary functional groups), (total number of functional groups indexed/total number of complementary functional groups) x 100, (total number of functional groups indexed/total number of functional groups), (total number of functional groups indexed/total number of functional groups) x 100, or by some other means.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5-20 of copending Application No.

10/626983 which has been allowed and the issue fee paid but has yet to be assigned a patent

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number. Although the conflicting claims are not identical, they are not patentably distinct from each other because although the instant claims differ in scope, the instantly claimed invention would have been obvious to one of ordinary skill in the art at the time of the instant invention because the instant claims overlap at 768 seconds at 25 C due to the mathematical overlap considering the precision of the instantly claimed "768" and experimental error, e.g. 768.1 falls within the scope of both claims since it rounds to within the mathematical precision required of both sets of claims and the experimental error encompassed by both sets of claims. Furthermore, the endpoints of the ranges of gel times at 25 C almost touch mathematically, ignoring experimental error and mathematical precision requirements of basic science. Thus, they are as close as they can be. They are so close that they are expected to have the same properties within measurable limits at their closest endpoints, i.e. about 768 seconds. Therefore they are expected to have the same properties and are obvious according to MPEP 2144.05, Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). It would appear that the same compounds and catalysts are used and that the gel time of the copending claims at 175C would therefore be expected to fall within the scope of the gel time of the instant claims at 140C.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disclosed reaction systems, does not reasonably provide enablement for all of the reaction systems encompassed by the instant claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is

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most nearly connected, to make and/or use the invention commensurate in scope with these claims.

A. It would require undue experimentation to determine all of the reaction systems which fall within the scope of the instant claims and particularly those which meet the instantly claimed gel time parameters from the disclosure of the instant specification other than those specifically disclosed by the instant specification because the instantly claimed reactants encompass a wide range of reaction times based on reactant viscosities, reactant compatibilities, steric hindrances, and all of the other properties known to the ordinary skilled artisan to affect reaction times as well as a wide range of reactant and catalyst amounts and catalyst types. All of these factors are known to affect the gel times materially. The instant specification gives little or no guidance in choosing from this vast array of reaction systems, other than those reaction systems specifically disclosed in the instant specification, so as to obtain both of the instantly claimed gel rates simultaneously. Complicating the issue is that one might obtain one gel rate but not the other. Given the unpredictability of the art, the vast amount of experimentation necessary (apparently infinite which is itself undue in that it is impossible to perform), and the lack of guidance in the instant specification as to how one is to choose from the vast array of reaction systems so as to achieve the instantly claimed gel rates, other than from those reaction systems specifically described in the instant specification, it is the examiner's position that undue experimentation would be required to determine all of those reaction systems encompassed by the instant claims but not specifically disclosed by the instant specification and the instant specification does not enable the full scope of the instant claims.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7, 10-15, 17, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5374486 Clatty et al..

Clatty et al. discloses the instantly claimed reaction systems at the abstract; column 1, lines 28-68, particularly 37-49; column 2, lines 1-68, particularly lines 16-21 of which the amounts of catalyst are expected to encompass those catalyst amounts giving the instantly claimed gel rates; column 3, lines 1-68, particularly 34 which encompasses the instantly claimed fatty ester of claim 13 and the polyester polyol of claim 13 and 13-56 where the use of any of the aromatic ester forming reactants meets the instant claim 10; column 4, lines 1-68; column 9, line 26 through column 10, line 11, particularly column 10, lines 5-11 and many of these catalysts are known to catalyze the trimerization reaction as well as the urethane reaction, and lines 18-19 and 60 which falls within the scope of the instant claims 2 and 7; column 11, lines 40-45 which encompasses the instantly claimed continuous fibers; column 12, lines 1-45 of which crude MDI falls within the scope of the instant claims 15 and 17 and lines 5-7 falls within the scope of the instant claims 11 and 14; and the remainder of the document. The patentee is silent regarding the

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instantly claimed gel rates. The PTO has no facilities to test the patentee's compositions. It is expected that the compositions of the patentee will necessarily and inherently possess the instantly claimed gel times since the reactants and catalyst systems and catalyst amounts are the same as those of instant claims as interpreted by the applicant's examples, particularly where lower amounts of catalyst are used (column 15, lines 24-25). The burden is therefore on the applicant to show that the above reaction systems of the patentee do not necessarily encompass the instantly claimed gel rates particularly where the lower catalyst amounts are used. The above systems must be suitable for use in pultrusion methods since they contain the instantly claimed components and no reason is seen why they would not be.

8. Claims 1-7, 10-15, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 5374486 Clatty et al..

Clatty et al. discloses the instantly claimed reaction systems at the abstract; column 1, lines 28-68, particularly 37-49; column 2, lines 1-68, particularly lines 16-21 of which the amounts of catalyst are expected to encompass those catalyst amounts giving the instantly claimed gel rates; column 3, lines 1-68, particularly 34 which encompasses the instantly claimed fatty ester of claim 13 and the polyester polyol of claim 13 and 13-56 where the use of any of the aromatic ester forming reactants meets the instant claim 10; column 4, lines 1-68; column 9, line 26 through column 10, line 11, particularly column 10, lines 5-11 and many of these catalysts are known to catalyze the trimerization reaction as well as the urethane reaction, and lines 18-19 and 60 which falls within the scope of the instant claims 2 and 7; column 11, lines 40-45 which encompasses the instantly claimed continuous fibers; column 12, lines 1-45 of which crude MDI falls within the scope of the instant claims 15 and 17 and lines 5-7 falls within the scope of the

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instant claims 11 and 14; column 13, lines 44-57 which appears to fall within the scope of the instant claims 4-5; column 14, lines 32-45; column 15, lines 14-27; and the remainder of the document. The patentee is silent regarding the instantly claimed gel rates. The PTO has no facilities to test the patentee's compositions. It is expected that the compositions of the patentee will necessarily and inherently possess the instantly claimed gel times since the reactants and catalyst systems and catalyst amounts are the same as those of instant claims as interpreted by the applicant's examples, particularly where lower amounts of catalyst are used (column 15, lines 24-25). The burden is therefore on the applicant to show that the above reaction systems of the patentee do not necessarily encompass the instantly claimed gel rates particularly where the lower catalyst amounts are used. The above systems must be suitable for use in pultrusion methods since they contain the instantly claimed components and no reason is seen why they would not be.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the above discussed combinations of ingredients of the patentee because they would have been expected to give the results disclosed by Clatty as well as gel times which are predictable to the ordinary skilled artisan from the disclosure of Clatty, particularly the catalyst amounts.

9. Claims 1, 3-6, 10-14, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5112282 Patterson.

Patterson discloses the instantly claimed reaction system at the abstract; column 3, lines 35-68; column 4, lines 1-68, particularly 52-68 which encompasses the instantly claimed continuous fibers; column 5, lines 63-68; column 6, lines 1-68, particularly lines 1-8, 26-29, which falls

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within the scope of the instant claims 11 and 14, lines 30-32, and 38-67; column 7, lines 1-68, particularly 1-2 and 37-63; column 9, lines 8-68, particularly 26-43, which given the intermediate gel temperatures between those gel temperatures of the instant claims would appear to give the instantly claimed gel rates where the gel rate of the patentee is intermediate to those of the instant claims.

The patentee is silent regarding the instantly claimed gel rates. The PTO has no facilities to test the patentee's compositions. It is expected that the compositions of the patentee will necessarily and inherently possess the instantly claimed gel times since the reactants and catalyst systems and catalyst amounts are the same as those of instant claims as interpreted by the applicant's examples, particularly where the gel rates of the patentee of column 9 are intermediate to those gel rates of the instant claims. The burden is therefore on the applicant to show that the above reaction systems of the patentee do not necessarily encompass the instantly claimed gel rates particularly where the gel rates of the patentee of column 9 are intermediate to those gel rates of the instant claims. The above systems must be suitable for use in pultrusion methods since they contain the instantly claimed components and no reason is seen why they would not be.

10. Claims 1, 3-6, 10-14, and 21 are rejected under 35 U.S.C. 103(a) as being US Pat. No. 5112282 Patterson.

Patterson discloses the instantly claimed reaction system at the abstract; column 3, lines 35-68; column 4, lines 1-68, particularly 52-68 which encompasses the instantly claimed continuous fibers; column 5, lines 63-68; column 6, lines 1-68, particularly lines 1-8, 26-29, which falls within the scope of the instant claims 11 and 14, lines 30-32, and 38-67; column 7, lines 1-68,

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particularly 1-2 and 37-63; column 9, lines 8-68, particularly 26-43, which given the intermediate gel temperatures between those gel temperatures of the instant claims would appear to give the instantly claimed gel rates where the gel rate of the patentee is intermediate to those of the instant claims.

The patentee is silent regarding the instantly claimed gel rates. The PTO has no facilities to test the patentee's compositions. It is expected that the compositions of the patentee will necessarily and inherently possess the instantly claimed gel times since the reactants and catalyst systems and catalyst amounts are the same as those of instant claims as interpreted by the applicant's examples, particularly where the gel rates of the patentee of column 9 are intermediate to those gel rates of the instant claims. The burden is therefore on the applicant to show that the above reaction systems of the patentee do not necessarily encompass the instantly claimed gel rates particularly where the gel rates of the patentee of column 9 are intermediate to those gel rates of the instant claims. The above systems must be suitable for use in pultrusion methods since they contain the instantly claimed components and no reason is seen why they would not be.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the above discussed combinations of ingredients of the patentee because they would have been expected to give the results disclosed by Patterson as well as gel times which are predictable to the ordinary skilled artisan from the disclosure of Patterson, particularly the intermediate gel times of the patentee between those of the instant claims.

11. Claims 1-6, 10-15, 17-18, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 4810444 Alberino et al..

Alberino discloses the instantly claimed reaction systems of polyol, polyisocyanates, continuous fibers, and catalysts at the abstract; column 1, lines 60-68; column 6, lines 17-68, particularly 17-44; column 7, lines 1-68, particularly lines 10-25 which fall within the scope of the instant claims 11 and 14 and 47-56; column 8, lines 1-68, particularly 13-23 which falls within the scope of the instant claims 15 and 17 and lines 62-64 which fall within the scope of the polyester polyols of the instant claims 10 and 13; column 9, lines 1-68, particularly 5-21 which falls within the scope of the instant claims 4-5, lines 22-33 which falls within the scope of the instant claim 18, lines 40-47 of which the lower amounts appear to encompass the instantly claimed gel rates since the reactants and amounts thereof are otherwise those of the instant claims particularly considering the gel rates of the intermediate temperatures of column 9, lines 63-68 and column 10, lines 1-13; column 10, lines 14-68, particularly 28-29 which falls within the scope of the instant claim 2; and the remainder of the document.

The patentee is silent regarding the instantly claimed gel rates. The PTO has no facilities to test the patentee's compositions. It is expected that the compositions of the patentee will necessarily and inherently possess the instantly claimed gel times since the reactants and catalyst systems and catalyst amounts are the same as those of instant claims as interpreted by the applicant's examples, particularly where lower amounts of catalyst are used (column 9, lines 31-47). The burden is therefore on the applicant to show that the above reaction systems of the patentee do not necessarily encompass the instantly claimed gel rates particularly where the lower catalyst amounts are used. The above systems must be suitable for use in pultrusion methods since they contain the instantly claimed components and no reason is seen why they would not be.

12. Claims 1-15 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 4810444 Alberino et al..

Alberino discloses the instantly claimed reaction systems of polyol, polyisocyanates, continuous fibers, and catalysts at the abstract; column 1, lines 60-68; column 6, lines 17-68, particularly 17-44; column 7, lines 1-68, particularly lines 10-25 which fall within the scope of the instant claims 11 and 14 and 47-56; column 8, lines 1-68, particularly 13-23 which falls within the scope of the instant claims 15 and 17 and lines 62-64 which fall within the scope of the polyester polyols of the instant claims 10 and 13; column 9, lines 1-68, particularly 5-21 which falls within the scope of the instant claims 4-5, lines 22-33 which falls within the scope of the instant claim 18, lines 40-47 of which the lower amounts appear to encompass the instantly claimed gel rates since the reactants and amounts thereof are otherwise those of the instant claims particularly considering the gel rates of the intermediate temperatures of column 9, lines 63-68 and column 10, lines 1-13; column 10, lines 14-68, particularly 28-29 which falls within the scope of the instant claim 2; and the remainder of the document.

The patentee is silent regarding the instantly claimed gel rates. The PTO has no facilities to test the patentee's compositions. It is expected that the compositions of the patentee will necessarily and inherently possess the instantly claimed gel times since the reactants and catalyst systems and catalyst amounts are the same as those of instant claims as interpreted by the applicant's examples, particularly where lower amounts of catalyst are used (column 9, lines 31-47). The burden is therefore on the applicant to show that the above reaction systems of the patentee do not necessarily encompass the instantly claimed gel rates particularly where the lower catalyst amounts are used. The above systems must be suitable for use in pultrusion

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methods since they contain the instantly claimed components and no reason is seen why they would not be.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the above discussed combinations of ingredients of the patentee because they would have been expected to give the results disclosed by Alberino as well as gel times which are predictable to the ordinary skilled artisan from the disclosure of Alberino, particularly the intermediate gel times of the patentee between those of the instant claims and the catalyst amounts of Alberino, particularly the lower amounts.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the release agents of the instant claims 7-9 as the release agents of the patentee because these types of release agents are well known in the art and would have been expected to function as release agents in the compositions of the patentee.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the catalysts of the instant claims 19 and 20 as the catalysts of Alberino because the patentee encompasses the use of alkali carboxylate and amine catalysts and the catalyst of claim 19 is the most commonly used alkali carboxylate catalyst and blocking amine catalysts to achieve longer potlife at lower temperatures is well known in the art and would have been expected to give its typical benefits to the compositions of the patentee using amine catalysts.

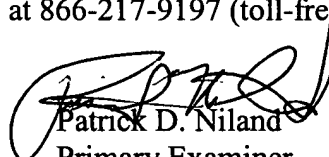
13. Claim 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st and 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Patrick D. Niland
Primary Examiner
Art Unit 1714